

SUTRA PIC

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Source: *The Hindu*

Manifest pedagogy: The role of livestock is important as a source for doubling farmers income and also for diversification of Indian agriculture. There is also a need for technology deepening in this regard.

In news: The Ministry of Science and Technology has launched the “**Scientific Utilization through Research Augmentation-Prime Products from Indigenous Cows**” (SUTRA-PIC India).

Placing it in syllabus: Agriculture and allied sectors

Static dimensions:

- Schemes for cow
- Kamdhenu
- National dairy plan

Current dimensions:

- Sutra pic
- Criticisms

Content:

Schemes for cows in India:

The government schemes for development of cattle and dairy farming are as follows:

Rashtriya Gokul Mission

- The Rashtriya Gokul Mission was launched in 2014 for conservation and development of indigenous breeds in a focused and scientific manner.

Objectives:

- Development and conservation of indigenous breeds
- Establishment of integrated cattle development centres “**Gokul Grams**” to develop indigenous breeds including upto 40% nondescript breeds.
- To enhance milk production and productivity
- To upgrade non descript cattle using elite indigenous breeds like Gir, Sahiwal, Rathi, Deoni, Tharparkar, Red Sindhi
- To distribute disease free high genetic merit bulls for natural service.

National Programme for Bovine Breeding and Dairy development (NPBBD)

- It was initiated in February 2014 to integrate milk production and dairying activities in a scientific and holistic manner.
- The **Scheme has two components** (a) National Programme for Bovine Breeding (NPBB) and (b) National Programme for Dairy Development (NPDD).

Objectives:

- to arrange quality Artificial Insemination (AI) services at farmers’ doorstep;
- to bring all breedable females under organised breeding through AI or natural service using germplasm of high genetic merits;
- to conserve, develop and proliferate selected indigenous bovine breeds of high socio-economic importance;
- to provide quality breeding inputs in breeding tracts of important indigenous breeds so as to prevent the breeds from deterioration and extinction;

Pashu Sanjivni:

- Pashu Sanjivni component under National Mission on Bovine Productivity scheme was initiated by the Government in November 2016.

- 88 million milk producing animals out of 300 million cattle and buffaloes are being identified using polyurethane tags with **12 digit unique identification (UID) number.**
- **Data of the identified animals is being uploaded on Information Network on Animal Health and Productivity (INAPH) data base.**
- It is crucial for control and spread of animal diseases, scientific management of animals, enhanced production and productivity, improvement in quality of livestock & livestock products, increase in trade of livestock and livestock products by meeting out sanitary and phytosanitary issues.

E-Pashu Haat Portal:

- The e-pashu haat portal was launched in November 2016 for **linking farmers and breeders of indigenous breeds.**
- Farmers by accessing this portal can get to know information about certified animals, its parents' information, breeding, the volume of milk given by bovine animals etc..
- The portal **minimises the involvement of middlemen and facilitates direct links between 'farmer to farmer' and 'farmer to institutes'.**

Kamdhenu:

- The Union Cabinet approved the proposal for establishment of **Rashtriya Kamdhenu Aayog** for conservation protection and development of cows and their progeny.
- This move will lead to conservation, protection and development of cattle population in the country including development and conservation of indigenous

breeds.

- It will result in increased growth of livestock sector which is more inclusive, benefitting women, and small and marginal farmers.
- The Aayog will work in collaboration with Veterinary, Animal Sciences or Agriculture University or departments or organizations of the Central/State Governments.
- It was proposed in the Union Budget 2019-20.

National Dairy Plan (NDP):

- NDP- phase 1 was a **Central Sector Scheme** implemented by the National Dairy Development Board (NDDB) through End Implementing Agencies (EIA) for a period of 2011-12 to 2018-19.
- It focussed on **18 major milk producing states** which together account for over 90% of the country's milk production.

Objectives:

1. To help increase productivity of milch animals and thereby increase milk production to meet the rapidly growing demand for milk.
2. To help provide rural milk producers with greater access to the organised milk-processing sector.

As phase-1 came to an end in November, 2019, the NDDB has initiated **talks with the World Bank** and the government departments concerned to go ahead with the second phase of the Plan.

The **second phase will have a projected financial outlay of about ₹8,000 crore.**

The second phase of the NDP will primarily **focus on** developing **milk processing infrastructure** and **establishment of milk quality testing equipment** at critical points of procurement areas. It will also look at **promoting biogas for households in**

villages.

SUTRA PIC:

- The initiative, SUTRA PIC, proposed to **research on 'indigenous' cows** is led by the Department of Science and Technology (DST).
- The **partners are** the Department of Biotechnology, the CSIR, the Ministry for AYUSH and the Indian Council of Medical Research(ICMR).

It has **five themes**–

- Uniqueness of Indigenous Cows
- Prime-products from Indigenous Cows for Medicine and Health
- Prime-products from Indigenous Cows for Agricultural Application
- Prime-products from Indigenous Cows for Food and Nutrition
- Prime-products from indigenous cows-based utility items

Objectives:

- to perform **scientific research on complete characterisation of milk and milk products** derived from indigenous cows;
- **scientific research on nutritional and therapeutic properties of curd and ghee** prepared from indigenous breeds of cows by traditional methods;
- development of **standards for traditionally processed dairy products** of Indian-origin cows;

Science for Equity, Empowerment and Development (SEED) (a division under the Department of Science and Technology) is in charge of the programme. In 2017, SEED constituted a National Steering Committee (NSC) for **'Scientific Validation and Research on Panchagavya (SVAROP)'**.

Panchagavya is a mixture of five (pancha) products of the cow

(gavya) – milk, curd, ghee, dung and urine. Its proponents believe it is an **Ayurvedic panacea which can cure a wide range of ailments.**

Note:

According to the Journal of Animal Research article, **India has 190.9 million cattle and 43 registered native cattle breeds** (as of 2019).

The **exotic / crossbred population has increased** by 20.18% during the period of last census while the **population of indigenous cattle has decreased** by 8.94% during the same duration.

The **reasons for depletion of native breeds** includes cross-breeding with exotic breeds, economically less viable, losing utility, reduction in herd size and the large-scale mechanisation of agricultural operation.

Criticisms:

- At least 400 scientists have petitioned the Department of Science & Technology (DST) to withdraw the proposal of SUTRA PIC.
- The **key concerns** expressed are:
 1. The research programme appeared to endorse the belief that indigenous cows had “special” and “unique” qualities and that this opened the **possibility of money being “wasted to investigate imaginary qualities derived from religious scriptures”.**
 2. The programme **did not encourage fair comparison with other breeds of cows** around the world or other bovine species within India.
 3. Given that scientific funding for several research programmes is pending and researchers not getting their fellowships on time, the **new scheme is considered as dubious and additional burden.**

